Supplementary data

Rapid analytical approach for bioprofiling compounds with radical scavenging and antimicrobial activities from seaweeds

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Figure captures

Figure S1. Images of collected Korean seaweeds *Saccharina japonica* (samples 1, 2 and 5) and *Undaria pinnatifida* (samples 3 and 4).

Figure S2 S1. HPTLC obtained by preparative chromatography of sample 3: A) under 366 nm, B) under visible light, C) after derivatization with anisaldehyde-sulfuric acid, D) after scraping the bioactive band.

Figure S3 S2. Total ion chromatograms (TICs) of eluted bioactive spot band with hR_F value at 78 obtained from the sample 3, obtained by UHPLC-LTQ-MS/MS² analysis.

Figure S4 S3. Mass spectra of compounds 1, 2, and 3-fatty acids in both positive A), C), E) and negative B), D), F) ionization modes.

Figure S5. MS/MS spectra of compounds 1, 2, and 3 negative A), C), E) and positive B), D), F) ionization modes.

Figure S1.

Sample 1

Sample 2

Sample 3

Sample 4

Sample 5

Figure S2.

Figure S3

Figure S4

Stearidonic acid (compound 1)

Eicosapentaenoic acid (compound 2)

Arachidonic acid (compound 3)

Figure F5.

Stearidonic acid (compound 1)

Eicosapentaenoic acid (compound 2)

Arachidonic acid (compound 3)